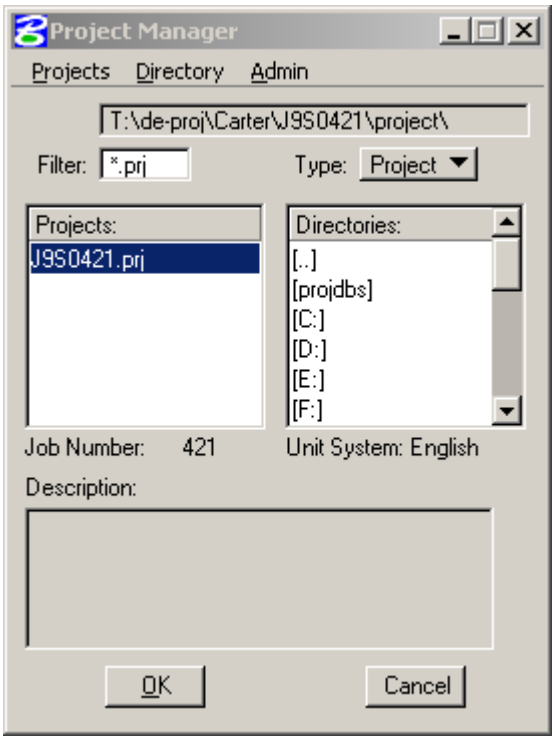
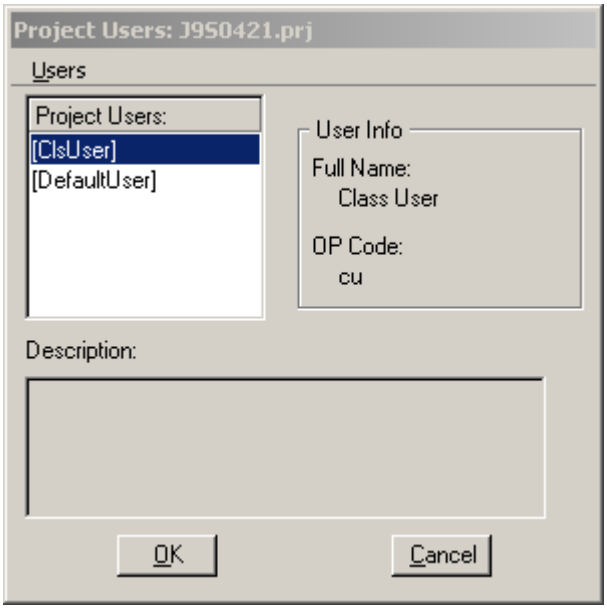
GeoPak Alignments and Profiles to Carlson

1. Open T:\de-proj\Carter\J0S0421\data\ **XS_Route_W.dgn**

1. Open the project **T:\de-proj\Carter\J9S0421\project\ J9S0421.prj**.



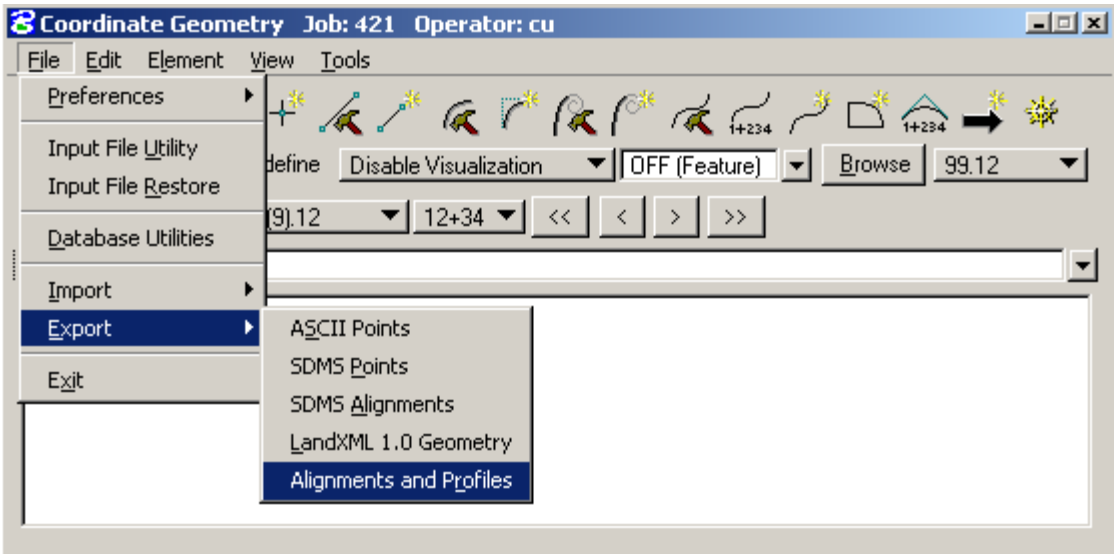
2. Select the user **ClsUser**.



4) Next, we need to create a file (RD5 file for Carlson) that contains the alignment information for Route W. To do this there are two ways to access the tool. One way is to open Coordinate Geometry by selecting the following from the Applications pull down:

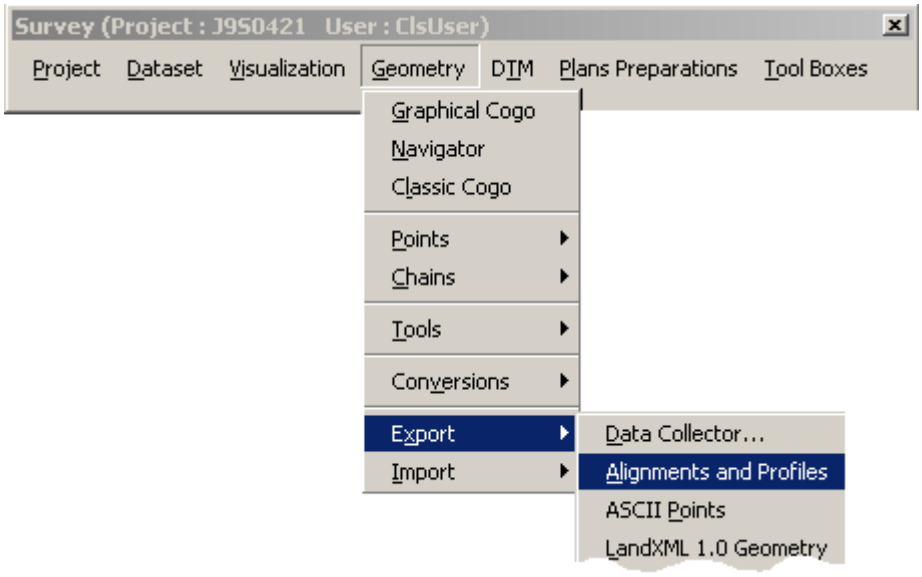
Applications > GeoPak Road > Geometry > Coordinate Geometry

5) Once in Coordinate Geometry select **File > Export > Alignments and Profiles**

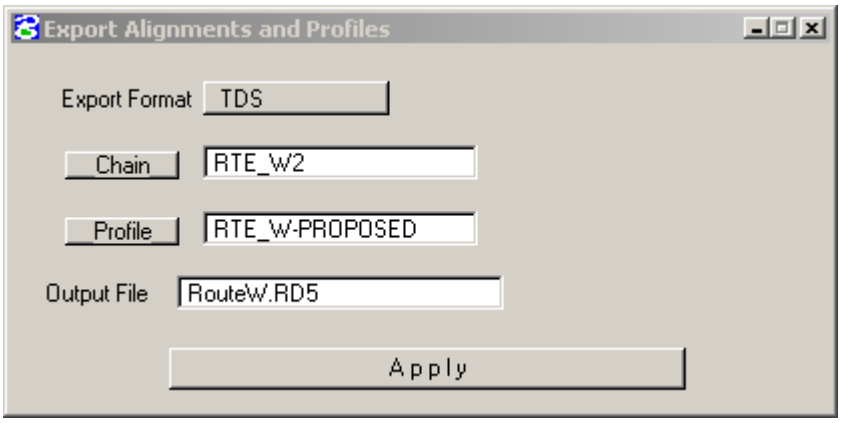


6) Another way to open the **Alignments and Profile** tool is to select the following from the Survey Menu Bar:

Geometry > Export > Alignments and Profiles



7) In the Export Dialog set the following fields: Begin Point, Export Format, Chain, Profile, and the name of the Output file.



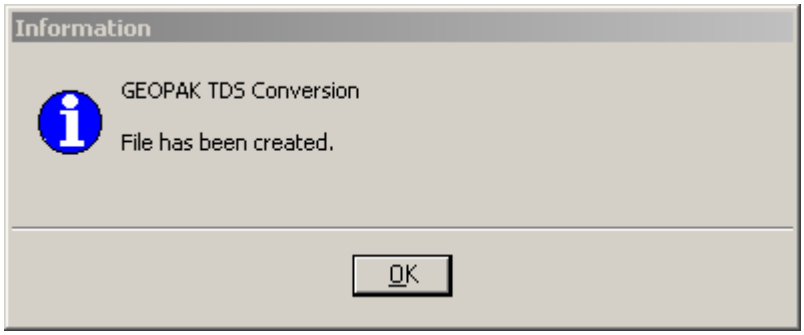
Export Format = TDS will work with the current Carlson version.

Chain = The Baseline of the Cross Sections that you're wanting to export.

Profile = Proposed profile that is associated to the Chain/Profile. (**Optional**)

Output Format = Name of the chain file that you want to create. This will be the file that will be imported into your calculator.

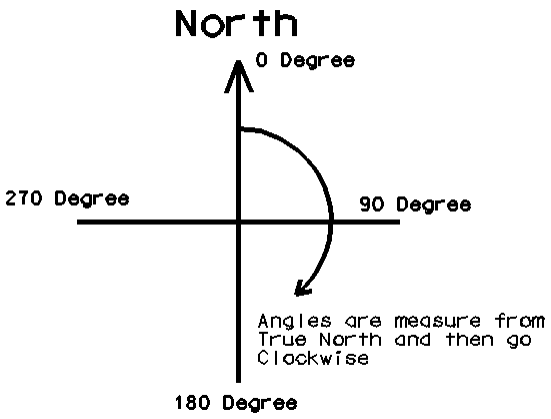
8) When the "**Apply**" button is selected GeoPak will show you the following Dialog:



10) Below is what the RouteW.RD5 looks like in UltraEdit (or any other Text editor).

```
HR++++++++++++++++++++++++++++++++
HL,28.47424,61.421
HL,31.10489,87.771
HL,30.09330,94.466
HL,30.45567,779.623
HL,30.48239,176.395
HL,30.20584,138.165
HL,30.15459,93.243
HL,30.32203,206.276
HL,30.06296,94.329
HL,30.22244,92.375
HL,30.17201,96.619
HL,30.49258,77.451
HL,30.34418,140.376
HL,31.02187,137.020
HL,33.05493,115.599
HL,34.43215,115.599
HL,37.12381,78.136
HL,37.43489,96.472
HL,38.08392,86.852
HL,38.35489,97.434
HL,38.31362,94.645
HL,38.51206,89.809
HL,38.19255,68.485
HL,38.52467,140.463
HL,39.30188,95.045
HL,38.53259,108.236
HL,38.27561,61.537
HL,38.05528,38.667
HL,-1.00000,38.667
HL,36.13565,52.849
HL,33.16237,53.159
HL,30.33370,34.833
HL,27.48385,47.680
HL,26.20358,42.624
HL,21.59177,47.387
HL,19.53373,35.362
HL,16.25250,57.469
HL,14.27558,47.075
HL,11.09319,44.389
HL,8.44040,35.244
HL,5.38129,48.370
HL,1.05178,66.201
HL,359.48223,35.033
HL,356.17362,56.857
HL,353.26545,78.676
HL,350.53468,115.094
HL,349.36568,91.283
HL,349.15412,74.427
HL,348.30017,51.183
HL,349.17269,57.763
HL,348.40206,90.622
HL,349.04121,56.112
HL,348.30398,63.748
HL,349.39216,55.804
HL,348.30209,64.289
HL,349.21097,112.701
HL,349.06284,64.716
HL,349.18380,57.062
HL,349.11514,178.620
HC,349.06281,954.930,867.648,R
HL,-1.00000,1838.710
HC,-1.00000,1909.859,983.333,L
HL,-1.00000,79.659
HL,-1.00000,2159.794
VR++++++++++++++++++++++++++++++++
VG,50.000,-3.680
VG,50.000,-3.480
VG,50.000,-2.700
VG,50.000,-1.340
VG,50.000,0.520
VG,50.000,0.560
VG,65.410,-0.061
VG,64.543,-0.122
VC,350.001,-0.122,3.590
VG,307.776,3.590
VC,780.000,3.590,-2.333
VG,86.550,-2.333
VC,420.000,-2.333,2.183
VG,244.460,2.183
VC,1000.000,2.183,-6.102
VG,8.860,-6.102
VG,56.330,-5.059
VG,32.670,-5.448
VG,31.280,-4.124
VG,31.270,-4.125
VG,34.520,-4.635
VG,38.690,-3.231
VG,50.790,-3.170
VG,40.200,-2.634
VG,58.140,-2.634
VG,48.510,-2.845
VG,50.000,-2.840
VG,50.000,-3.700
VG,50.000,-4.060
VG,850.002,-0.026
XR++++++++++++++++++++++++++++++++
XL++++++++++++++++++++++++++++++++
```

10 Cont.) The Alignment and Profile portion of RD5 file is formatted with the following nomenclature:



HL,31.10489,87.771

```
HL        = Horizontal Line
31.10489  = Line Direction
87.771    = Line Distance.
```

HC,349.06281,954.930,867.648,R

```
HC        = Horizontal Curve
349.06281 = Direction Back
954.930   = Curve Radius
867.648   = Curve Length
R         = Curve turning to the right
```

HS,97.01374,1000.000,500.000,L,T

```
HS        = Horizontal Spiral
97.01374  = Direction Back
1000.000  = Radius
 500.000  = Spiral Length
L         = Spiral turning to the Left
T         = Spiral Back (after tangent)
     or
C         = Spiral Ahead (after Curve)
```

VG,50.000,-3.680

```
VG        = Vertical Grade
50.000    = Distance
-3.680    = Grade
```

VC,350.001,-0.122,3.590

```
VC        = Vertical Curve
350.001   = Length of Curve
 -0.122   = Back Grade
  3.590   = Forward Grade
```